USN | | | | | | | | | | 15CS664

Sixth Semester B.E. Degree Examination, Dec.2023/Jan.2024
Python Application Programming

Time: 3 hrs.   Max. Marks: 80

Note: *Answer any FIVE full questions, choosing ONE full question from each module.*

Module-1

1 a. List the features of Python Programming Language (at least FIVE). **(05 Marks)**
   b. What is the role of a programmer? List two skills required to be a programmer. **(05 Marks)**
   c. Explain the chained and nested conditional execution statements along with syntax and flow chart. **(06 Marks)**

OR

2 a. What are Python words and sentences? Explain with an example for each. **(04 Marks)**
   b. Differentiate compiler and interpreter. **(04 Marks)**
   c. Write python programs to i) Find largest of three numbers
      ii) Check whether the given year is leap year or not with functions. **(08 Marks)**

Module-2

3 a. Demonstrate the use of break and continue keywords in looping structures using a snippet code. **(06 Marks)**
   b. Explain string slicing in Python. Show with examples. **(04 Marks)**
   c. Write a Phytho program to accept a sentence from the user and display the longest word of that sentence along with its length. **(06 Marks)**

OR

4 a. List and explain any four built in string manipulation functions supported by Python. **(06 Marks)**
   b. Write the Python code to display the last six characters of the string "Make hay while the sun shines" to the console. **(03 Marks)**
   c. Write a Pytho program to accept a file name from the user :
      i)   Display the first N-lines of the file.
      ii) Find the frequency of occurrence of the word accepted from the user in the file. **(07 Marks)**

Module-3

5 a. Explain the difference between a list and a dictionary. **(04 Marks)**
   b. Make a list of first ten letters of the alphabet then using the slice operation do the following :
      i)   Print the first three letters from the list.
      ii)   Print the three letters from the middle.
      iii) Print the letters from 5th letters to the end of the list. **(04 Marks)**
   c. Discuss the lists handling function in python with example. **(08 Marks)**

OR

6 a. Difference between list and dictionary. **(08 Marks)**
   b. Define Tuple. Explain DSU pattern. Write a python code to determinate tuples by sorting a list of words from longest to shortest using·loops. **(04 Marks)**
   c. Explain the need of Regular expressions in python language. **(04 Marks)**

Module-4

7 a. Create a student class and initialize it with name and roll number. Design methods to :
    i)   Display_to display all information of the student.
    ii) setAge_to assign age to student.
    iii) setMarks_to assign marks to the student. **(07 Marks)**
   b. Using datetime module write a program that gets the current date and prints the day of the week. **(04 Marks)**
   c. What are Polymorphic functions? Explain with a snippet code **(05 Marks)**

OR

8 a. What does the keyword self in Python mean? Explain with an example. **(05 Marks)**
   b. Show using a Python code how_init_method is invoked when an object is initiated. Explain its working. **(06 Marks)**
   c. Explain _ str_ method with a Pytho program. **(05 Marks)**

Module-5

9 a. Demonstrate with the help of Python construct i) how to retrieve an image over HTTP.
    ii) how to retrieve web pages with urllib. **(08 Marks)**
   b. Compare and contrast the JavaScript object Notation (JSON) and XML. **(04 Marks)**
   c. What is Service – Oriented Architecture? List the advantages of the same. **(04 Marks)**

OR

10 a. Write a Python program that retrieve an user's Twitter friends , Parse the returned JSON and extract some of the information about the friends. **(08 Marks)**
   b. Create a simple spidering program that will go through Twitter accounts and build a database of them. **(08 Marks)**

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